FARM MANAGEMENT PRACTICES THAT GIVE BEST NET RESULTS

Wise use of credit and good farm management go hand in hand and, sound credit - that which contributes to a more efficient and profitable farming system - is good both for the borrower and the lender.

Many factors complicate the management of farms under present day conditions. Some of these which face the farm operator and his creditor are as follows:

(1) Capital needs are high. Relative to a decade or two ago, a far greater amount of capital is needed to buy a farm, equip it and purchase livestock.

Around 1940, an investment of about $5,000 was required for each full-time man employed in agriculture. Now, the figure runs from $15,000 to $20,000 per employee on the average--far more for some types of farming.

From 1940 to 1952 in this country the investment in farm real estate rose by nearly 200% and in farm machinery and equipment by more than 400%.

Examples of Real Estate Investments:

45 Central Missouri Farms (1952 records) (Av. size -- 334 acres)

Real estate investment	$20,000.00
Working capital	18,000.00
Total	$38,000.00

(Av.--365 PMWU per farm - - - - - - 1.4 men per farm)

143 N. East Kansas farms (1954 records) (Av. size -- 591 acres)

Real estate investment	$43,000.00
Working capital	24,000.00
Total	$67,000.00

(Av.--481 PMWU per farm - - - - - - 1.7 men per farm)

561 Indiana farms (1953 records) (Av. size -- 248 acres)

Real estate investment	$47,000.00
Working capital	25,500.00
Total	$72,500.00

(Av.--494 PMWU per farm - - - - - - 1.6 men per farm)

(2) Farm operating costs are high - both the total cash outgo and as a per cent of gross farm income. Many farm record summaries for the past two or three years show that cash operating costs take 60% to 70% of the gross income. Prior to World War II, 40% to 50% was about an average ratio of operating costs to income.

Talk by Albert R. Hagan, Extension Professor, Department of Agricultural Economics, College of Agriculture, Columbia, Missouri, June 9, 1955, before a meeting of Production Credit Association personnel. Reproduced by Division of Agricultural Economics Programs, Federal Extension Service, United States Department of Agriculture, Washington 25, D. C.

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Today, 2 or 3 years of operating costs may equal the total farm investment. Pre-war, the usual farm investment was 8 to 10 times annual operating costs.

Risk is higher because of this situation.

Insurance is imperative to protect investment and earning power. Fire and windstorm must be supplemented with other kinds such as liability and life insurance. All debts should be covered with term insurance. Present start toward insuring loans in some PCA's is setting a pattern which should be extended greatly.

Machinery and Feed Costs are the big cost items in present-day farming operations. On 143 N.E. Kansas farms in 1954, a break-down of costs was as follows:

	Amount	% of Total
Feed costs	$3,373.18	25.5
Machinery costs (included $1,801.34 depreciation)	4,505.07	34.1
Other	5,531.39	40.4
Total farm expenses	$13,209.64	

Feed and machinery expenses account for almost 60 percent of total.

(3) Cash out-go for family living is high. More "out-of-pocket" costs for both living and farm operations are leading to financial difficulties for many farm families.

Electric power has paved the way for modern homes, conveniences and luxuries which have revolutionized farm life. Radio, TV, bathrooms are wonderful but as Pete Stamper said on the Ozark Jubilee show - it's a long way from a "path" to a "bath" and it costs lots more money.

Cash family living records from rather large numbers of farm families during the past few years, show an annual cash out-go ranging from $1,600 to $3,000 for the average family of four - more than most families realize until they keep records for a year or two. Budget estimates by these families without records seem to run about one-half the actual cash out-go.

(4) Rapidly changing technology demands new skills and new investment of capital by today's farm manager. New methods of insect and disease control, of fertilization and seeding, of livestock breeding and feeding, of erosion control and of irrigation serve to illustrate the multitude of new techniques to be mastered by our farm operators.

A week ago today, I visited a young farmer in Dunklin County who had just invested $10,000 in a new well, turbine pump and necessary equipment for irrigating an 80-acre field of cotton. During the week prior to my visit, over 7 inches of rain had drenched this same field. We face many risks and uncertainties in today's farming businesses.

(5) Hand labor is scarce. This leads to more and more mechanization, requiring further investment of capital and new skills.

(6) Frequent changes in income tax laws and new social security coverage further complicate the task of farm accounting - an essential, though often neglected, feature of all good farm management systems.

In view of these, and many other complications, what farm management practices will help today's farm operator realize higher net returns? Or, what earmarks of good management should concern the lender in making sound farm loans?

Several years observation and study indicate that most successful farm managers and operators achieve the following goals:

(1) They follow a definite system of farming which makes full and efficient use of all resources. "Hit" or "miss" farming methods and "jumping in and out" of cropping systems and livestock enterprises don't characterize successful management.

Missouri's Balanced Farming program has helped thousands of Missouri farm families better systematize their farming operations. Balanced Farming helps them find answers to basic and fundamental questions - vital to successful, modern-day farming operations - such as these:

(a) What are all the resources we have at hand?

(b) What kind of farming system - crop rotations, livestock enterprises, etc. - will best provide the production and income we need?

(c) How can we arrange our farm to facilitate carrying out the chosen system most efficiently - considering a complete water management system, field layout, access lanes, automatic water supply to fields, pastures and farmstead sanitation for livestock, farmstead layout, home grounds, and other physical arrangements?

(d) Where do we start, what should we do each year to make the system work and pay its way and - where do we get the money?

(e) Which of the many improved farm practices and methods fit our farming system and offer best opportunity to increase net profits?

(f) How am I doin'? To really answer this one, a complete system of farm accounts - including a careful financial statement each year - is a must.

(2) They continually strive for high volume production and sales for the farm unit. With present-day overhead, operating and living costs, about \$8,000 to \$10,000 gross income is necessary for a one-man operation in order to stay above the "break-even" point. More is necessary for much new investment in improvements.

The following formulae illustrate the factors to consider:

(a) $\frac{\text{operating costs}}{\text{volume of production}} = \text{unit cost}$

(b) (Vol. of production x price/unit) - operating costs = profits

(c) Unit price - unit costs x vol. of production = profits

Of these factors, the farm manager has most control over volume of production. Stepping up volume of production - especially per acre, per animal unit, per hour of labor, per dollar invested, etc. - is the straightest avenue to higher profits on most Missouri farms.

Unit price can be affected some through higher quality, more timely and efficient marketing, etc., but the individual farmer has relatively little control over the price of a commodity at a given time.

Unit costs also can be adjusted to some extent but many are fixed - regardless of the volume of production.

(3) They eliminate wasteland and keep a high percent of the land in high profit crops which are adapted - such as cotton, corn, soybeans and alfalfa. (See Table I.)

(4) They use proper soil treatments, guided by soil tests, to help assure high acre yields and profits.

Most Missouri farmers are far below the point of diminishing returns in the use of soil treatments. Much of the acre cost of producing a crop is fixed, regardless of yield. The surest and quickest way to increase profits per acre - or lower cost per unit of production - is to increase acre yields as illustrated by the following data for corn:

Proper Fertilizer Use Cuts Corn Production Costs
(Soils Dept., University of Missouri)

Fertilizer cost per acre	Fixed cost per acre	Total cost per acre	Yield per acre	Value of Crop *	Net Profit per acre	Production cost per bushel
$ .00**	$29.25	$29.25	35 bu.	$49.00	$19.75	$0.84
4.50***	29.75	34.25	45 bu.	63.00	28.75	0.76
14.90****	31.50	46.40	80 bu.	112.00	65.60	0.58

* Corn @ $1.40 per bushel.
** Low rate.
*** Increased rate.
**** Fertilized according to soil test.

(5) They follow a good system of water management to help hold soil, soil treatments and moisture on fields where they can contribute most to higher yields. On bottom land, such practices as drainage and irrigation may serve a similar purpose.

Why terrace? This question is often asked and the answer is simple. It pays. A good water management system on upland gives greater flexibility to the cropping system. It permits more intensive cropping - a higher percentage of the farm land in high income producing crops such as corn and soybeans without undue losses from erosion. It protects the investment in land and soil treatments. It adds permanence and stability to the entire farming system.

(6) They establish a well-organized livestock system where it will help market the production from the land more profitably. They choose and combine the kind of livestock enterprises which suit the size of farm and the kind of feed produced and which give high dollar income. They usually concentrate their efforts on one or two major livestock enterprises. (See Table II.)

The present trend is toward more specialization and less diversification in farming systems - especially on smaller farms. High investment and operating costs and need for high volume are forcing the change.

Minimum size units suggested for commercial livestock enterprises are as follows:

Laying flocks --- 300 hens (probably 800 to 1,000 or better)
Hogs -- 8 to 12 sows; 16 to 24 litters
Beef cows -- 20 to 30 cows
Yearling steers -- 20 to 40 head
Dairy cows -- 18 to 25 cows (one man)
25 to 50 " (two men)
Sheep --- 30 to 40 ewes

Larger units often make better use of resources and add to profits.

(7) They strive for high production per animal unit, realizing that most of the profit comes from the "above average" production.

This is the key factor in profitable livestock production. Note the following data from surveys of actual production records:

Laying flocks ------- Eggs produced per hen	Income over feed cost/hen
100	.34
200	3.19
300	5.81

Milk Production and Income
Six 1954 D.H.I.A. Production Award Winners (compared with other Dairy farms)

	Average Mo. Dairy Cow (ARS-RMS) 1954	Average D.H.I.A. Cow 1953	Simple Average of Cows on Six Farms 1954
Milk corrected to 4 percent fat	$4,596	$8,440	$9,845
Value of product	207	380	429
Feed costs	130	161	168
Other costs	65	80	84
Labor income	12	139	177
No. cows needed for $3,000 labor income	250	22	17

(The Dairy News Letter - Nov. 1954 - Dairy Dept., Missouri College of Agriculture.)

Similar ratios apply to other types of livestock.

(8) They keep man-power fully employed at productive labor.

We usually don't get full-time pay for half-time work. On many Missouri farms, labor is not fully employed at profitable work. The following relationships between work units per man and labor income point up the importance of keeping labor gainfully employed.

	Total man work units	Work units per man	Operator's labor income
On 56 Central Mo. Dairy Farms in 1952	382	225	$1,510.00
	449	290	3,027.00
	494	379	3,777.00
On 45 Central Mo. General Farms in 1952	287	190	118.00
	350	259	1,636.00
	457	362	2,429.00

(9) They arrange the farmstead, fields, lanes, feeding, watering, etc., to make labor really count for high production.

(10) They utilize electric power and labor saving machinery for greater efficiency, keeping the investment in line with the size of the farm business.

(11) They - Keep good farm accounts, including an up-to-date financial statement;

Prepare an annual operating budget to guide current operations;

Keep production records on major crops and livestock enterprises;

Apply new capital where returns are likely to be <u>greatest</u> and <u>quickest</u>;

"Keep a close eye" on most advantageous time and methods of marketing products;

Review financial position each year; and they keep credit rating sound -

paying all debts when due.

(12) And, finally, the most successful managers are those who plan ahead for several years a complete system of "Balanced Farming" through which they can make most effective use of all their resources in sustaining a high level of production and income.